

FLOOD-STAGE REPORT FOR MAY 1940—Continued

River and station	Flood stage	Above flood stages— dates		Crest	
		From—	To—	Stage	Date
MISSISSIPPI SYSTEM—continued					
Ohio Basin—Continued					
Ohio—Continued.	<i>Feet</i>			<i>Feet</i>	
Dam No. 22, Ravenswood, W. Va.	44	Apr. 20	Apr. 24	51.2	Apr. 22.
Point Pleasant, W. Va.	40	Apr. 20	Apr. 25	51.6	Apr. 23.
Gallipolis Dam, Hogsett, W. Va.	50	Apr. 21	Apr. 25	57.1	Apr. 23.
Dam No. 28, Huntington, W. Va.	50	Apr. 21	Apr. 26	56.7	Apr. 23.
Dam No. 29, Ashland, Ky.	51	Apr. 21	Apr. 26	60.4	Apr. 23.
Dam No. 30, near Greenup, Ky.	52	Apr. 21	Apr. 26	61.0	Apr. 23-24.
Portsmouth, Ohio.	50	Apr. 21	Apr. 27	59.7	Apr. 24.
Dam No. 32, near Vanceburg, Ky.	53	Apr. 21	Apr. 27	60.1	Apr. 24.
Dam No. 33, near Maysville, Ky.	50	Apr. 21	Apr. 27	59.5	Apr. 24.
Dam No. 35, New Richmond, Ohio.	48	Apr. 21	Apr. 28	56.4	Apr. 24.
Dam No. 36, near Brent, Ky.	52	Apr. 20	Apr. 28	60.05	Apr. 24.
Cincinnati, Ohio.	52	Apr. 20	Apr. 28	60.04	Apr. 24.
Dam No. 37, Fernbank, Ohio.	50	Apr. 20	Apr. 28	58.95	Apr. 24.
Dam No. 38, near Grant, Ky.	51	Apr. 20	Apr. 28	58.2	Apr. 25.
Dam No. 39, Markland, Ind.	48	Apr. 21	Apr. 28	52.4	Apr. 25.
Louisville, Ky.: Upper gage.	28	Apr. 21	Apr. 29	35.0	Apr. 26.
Lower gage.	55	Apr. 21	Apr. 29	61.9	Apr. 26.
Dam No. 43, Evans Landing, Ind.	57	Apr. 21	Apr. 29	62.9	Apr. 26.
Dam No. 44, Leavenworth, Ind.	53	Apr. 21	Apr. 30	62.1	Apr. 26.
Dam No. 45, near Addison, Ky.	47	Apr. 21		53.6	Apr. 26-27.
Tell City, Ind.	38	Apr. 21		45.5	Apr. 26-27.
Dam No. 46, Owensboro, Ky.	41	Apr. 22		44.3	Apr. 27-28.
Dam No. 47, Newburgh, Ind.	38	Apr. 20		46.1	Apr. 27-28.
Evansville, Ind.	37	Apr. 21		43.75	Apr. 28.
Dam No. 48, Cypress, Ind.	38	Apr. 21		46.1	Apr. 28-29-30.
Mount Vernon, Ind.	35	Apr. 21		44.3	Apr. 30.
Dam No. 49, Uniontown, Ky.	37	Apr. 22		46.4	1.
Shawneetown, Ill.	33	Apr. 20		47.0	1.
Dam No. 50, Fords Ferry, Ky.	34	Apr. 20		49.7	1.
Dam No. 51, Golconda, Ill.	40	Apr. 23		45.6	1-2.
Paducah, Ky.	39	Apr. 27		41.8	2.
Dam No. 52, Brookport, Ill.	37	Apr. 22		43.5	2, 3.
Dam No. 53, Grand Chain, Ill.	42	Apr. 22		47.7	3.
Cairo, Ill.	40	Apr. 23		44.6	3.

FLOOD-STAGE REPORT FOR MAY 1940—Continued

River and station	Flood stage	Above flood stages— dates		Crest	
		From—	To—	Stage	Date
MISSISSIPPI SYSTEM—continued					
White Basin					
Black: Black Rock, Ark.	<i>Feet</i> 14	Apr. 19	6	18.2	1.
White: St. Charles, Ark.	25	Apr. 26	17	26.1	1-3.
Arkansas Basin					
North Canadian: Yukon, Okla.	8	22	25	10.4	22.
Red Basin					
Ouachita: Arkadelphia, Ark.	17	1	1	17.2	1.
Little: Whitecliffs, Ark.	25	{ 22	22	25.0	22.
Sulphur:		27	June 1	25.7	30-31.
Ringo Crossing, Tex.	20	{ (1) 10	11	22.5	10.
		20	26	23.1	22. 4
		27	June 2	24.0	29.
Naples, Tex.	22	{ 3	8	24.8	4-5.
		26	June 7	26.2	June 2.
Lower Mississippi Basin					
Big Lake Outlet: Manila, Ark.	10	(1)	13	-----	
St. Francis:					
Fisk, Mo.	20	3	4	21.05	4.
St. Francis, Ark.	18	(1)	8	-----	
WEST GULF OF MEXICO DRAINAGE					
Trinity:					
Dallas, Tex.	28	30	30	28.0	30.
Trinidad, Tex.	28	19	24	31.7	22.
Rio Grande: Espanola, N. Mex.	6	20	20	6.0	20.
PACIFIC SLOPE DRAINAGE					
San Joaquin Basin					
Kings: Piedra, Calif.	10	{ 11	11	10.15	11.
		15	16	10.25	15.
		25	25	10.3	25.

¹ Continued from preceding month.

WEATHER ON THE ATLANTIC AND PACIFIC OCEANS

[Marine Division, WILLIS E. HURD Acting in Charge]

NORTH ATLANTIC OCEAN, MAY 1940

By H. C. HUNTER

Atmospheric pressure.—The pressure averaged higher than normal over waters near the Iberian peninsula, Newfoundland, and eastern Canada. Just to eastward of the United States the average pressure was lower than normal; and there was an even more marked deficiency around the Azores, where low readings were prevalent from the 3d to 10th and again from the 22d to the 26th.

TABLE 1.—Averages, departures, and extremes of atmospheric pressure (sea level) at selected stations for the North Atlantic Ocean and its shores, May 1940

Station	Average pressure	Departure	Highest	Date	Lowest	Date
	<i>Millibars</i>	<i>Millibars</i>	<i>Millibars</i>		<i>Millibars</i>	
Lisbon, Portugal	1,017.4	+2.5	1,026	29	1,010	1, 2
Horta, Azores	1,017.8	-3.5	1,031	15	994	24
Belle Isle, Newfoundland ¹	1,015.4	+3.2	1,030	17	995	14
Halifax, Nova Scotia	1,016.0	+1.1	1,030	21	999	13
Nantucket	1,014.2	-1.4	1,025	30	1,001	4
Hatteras	1,013.2	-3.1	1,026	6	1,002	2
Turks Island	1,014.5	-1.4	1,019	6	1,007	19
Key West	1,014.9	0.0	1,024	6	1,009	24
New Orleans	1,014.9	0.0	1,025	6	1,006	24

¹ For 24 days.

NOTE.—All data based on a. m. observations only, with departures compiled from best available normals related to time of observation, except Hatteras, Key West, Nantucket, and New Orleans, which are 24-hour corrected means.

The extremes of pressure in available vessel reports were 1038.0 and 992.9 millibars (30.65 and 29.32 inches). The higher reading was noted by two vessels, near 41° N., 43° W., on the morning of the 5th. The low was recorded on the American liner *Exeter* at a late hour of the 23d, at about latitude 43° N., 36° W. The pressure was almost equally low during the forenoon of the 3d about 200 miles to southeastward of the mouth of Delaware Bay.

Cyclones and gales.—The month seems to have been less stormy over the North Atlantic Ocean than the average May, though a considerable number of vessels encountered fresh gales (force 8). There has been but one report received of a force as great as 10.

A well-developed low affected much of the eastern North Atlantic from the 3d to the 6th, being central on the former date to northwestward of the Azores and on the latter date near Iceland. The only whole gale of the month was met by the Dutch liner *Blommersdijk*, near 48° N., 27° W., during the night of the 4-5th.

Another storm of importance came soon after the middle of the month, the center being over or near Maine on the morning of the 18th, with only moderate strength. Eastward movement brought the center to a position slightly east of Newfoundland by the 20th, and to about 51° N., 26° W., by the 23d. The storm was by this latter date more intense, and a long trough extended from the center toward the south-southwest. The succeeding two days

showed but little advance, though there was considerable loss of strength.

Tropical disturbance.—Below is an account of a tropical disturbance which was traced from the 18th to the 27th, originating near Turks Island and disappearing near Newfoundland. It caused no very intense winds; its movement was northward near the 72d meridian till about in the latitude of the Chesapeake Capes, then eastward or northeastward at a comparatively low speed.

Fog.—There was considerable fog during the period 21st to 25th within the 5°-square, 30° to 35° N., 70° to 75° W. This square lies about midway between Bermuda and the coasts of Georgia and South Carolina, and during part of this time the weather was greatly affected by the low already referred to as moving northward from the tropics.

Farther northward the region near the coast, as far as Cape Cod, had almost daily fog from the 20th onward, though there had been comparatively little before the 20th. The square 40° to 45° N., 70° to 75° W., reported fog on 14 days, and the square adjoining this to southward, on 13 days; these two squares are indicated as having much more fog than any others in North Atlantic waters. For localities to eastward and northeastward of Cape Cod, as far as the 55th meridian, a moderate number of fog reports are at hand, the majority of these being for days after the 20th.

From the Grand Banks region reports are not plentiful, but some fog is shown to have occurred, mainly about the 7th or the 20th.

TROPICAL DISTURBANCE OF MAY 18-27, 1940

By JEAN H. GALLENE

The first tropical disturbance of the 1940 season was of minor intensity throughout its entire existence. The depression originated a short distance to the southeast of Turks Island during the evening of May 18 and moved in a general northerly direction for a period of about 4 days; thereafter its progressive motion was toward the east and northeast, where its identity was lost in the area between Nova Scotia and Newfoundland on the morning of May 27.

A slight fall of barometric pressure was charted in the region near Puerto Plata and Turks Island on the evening of May 18. At that time cloudy weather, gentle east winds, and a barometer reading of 1,007.8 millibars (29.76 inches) were observed at Turks Island. However, during the next 12 hours the wind at that station shifted to the southwest, increasing to force 5, while the barometer continued to fall gradually to 1,007.1 millibars (29.74 inches).

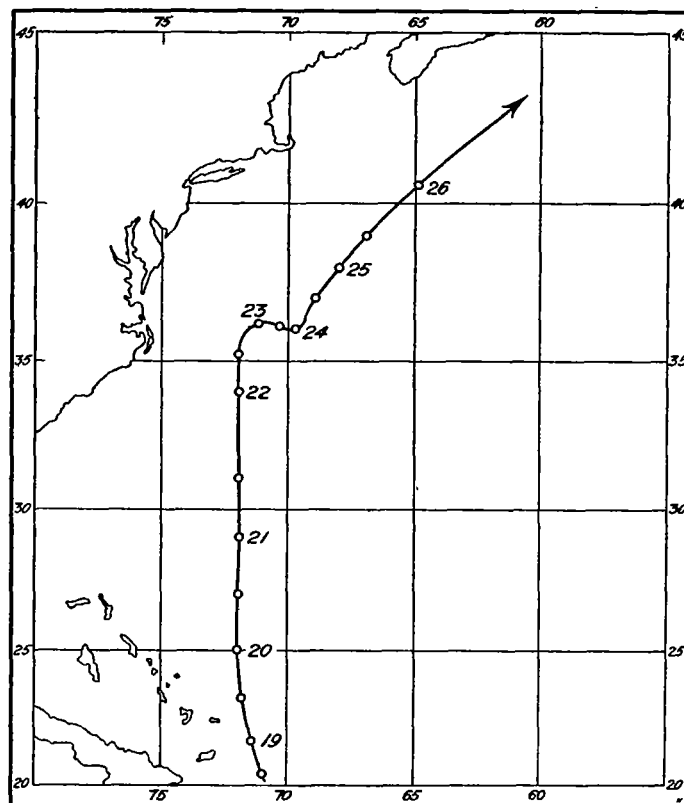
On the morning of May 19, a rather well-defined cyclonic circulation was observed, with the center of low pressure near latitude 22°45' N., and longitude 71°30' W. Winds of force 5-6 were noted in the northerly quadrant of the disturbance at this stage. (See figure.)

During the next 36 hours the disturbance moved in a general northerly direction, and reports from ships during that period indicate that strong to high winds were experienced over a considerable area.

Between 5 a. m. and 6 a. m. on May 21, the Belgian M. S. *Good Gulf* near latitude 30°12' N., and longitude 71° W. reported a barometer reading of 1,002.7 millibars (29.61

inches); wind southeast, force 8; heavy rain and very rough seas. The Belgian M. S. *Lubrafal* at midnight of the same day reported an easterly gale with a barometer reading of 995.6 millibars (29.40 inches) when near latitude 32°21' N., and longitude 71°52' W. This is the lowest barometer reading of record in connection with the disturbance. Several other vessels reported strong shifting winds and disturbed conditions on May 21.

The center was located near latitude 34° N., and 72° W. on the morning of the 22d; and from reports at hand, indications are that the barometric pressure had risen



somewhat as compared to that of the previous day and that the disturbance had become less violent.

At the morning observation of May 23, the disturbance was centered near latitude 36°15' N., and longitude 71°15' W. The progressive motion was then toward the east or slightly east-southeast, and on the following morning the center was at approximately 36° N., and 69°45' W. From that point it moved toward the northeast for the next 3 days and apparently merged with an area of low barometric pressure to the southwest of Newfoundland.

Gale winds of force 8 were the highest recorded in connection with this disturbance and no unusually low pressure was observed. No loss of life nor property damage has been reported.

Advisory warnings of the disturbance were issued by the Forecast Center at Jacksonville, Fla., on May 19 to 21.

This disturbance was unusual, in that from 1887 to date only four other occurrences of tropical cyclones have been recorded in the month of May; none was of hurricane intensity.